



[7590-01-P]

NUCLEAR REGULATORY COMMISSION

[NRC-2012-0100]

**Burnup Credit in the Criticality Safety Analyses of Pressurized Water Reactor
Spent Fuel in Transportation and Storage Casks**

AGENCY: Nuclear Regulatory Commission.

ACTION: Draft interim staff guidance; request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC or the Commission) is issuing for public comment Draft Spent Fuel Storage and Transportation Interim Staff Guidance (SFST-ISG), SFST-ISG-8, Revision 3, "Burnup Credit in the Criticality Safety Analyses of PWR Spent Fuel in Transportation and Storage Casks." This SFST-ISG provides guidance for use by NRC staff when reviewing applications requesting burnup credit in the criticality safety analyses of pressurized water reactor spent nuclear fuel (SNF) in transportation packages and storage casks. The draft SFST-ISG proposes to revise the criticality safety review procedures and acceptance criteria contained in NUREG-1536, Revision 1, "Standard Review Plan for Spent Fuel Dry Storage Systems at a General License Facility," NUREG-1567, "Standard Review Plan for Spent Fuel Dry Storage Facilities," and NUREG-1617, "Standard Review Plan for Transportation Packages for Spent Nuclear Fuel."

DATES: Submit comments by **[INSERT DATE: 30 DAYS FROM DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**. Comments received after this date will be considered, if it is practical to do so, but the NRC staff is able to ensure consideration only for comments received on or before this date.

ADDRESSES: You may access information and comment submissions related to this document, which the NRC possesses and is publicly available, by searching on <http://www.regulations.gov> under Docket ID **NRC-2012-0100**. You may submit comments by the following methods:

- **Federal Rulemaking Web Site:** Go to <http://www.regulations.gov> and search for Docket ID **NRC-2012-0100**. Address questions about NRC dockets to Carol Gallagher; telephone: 301-492-3668; e-mail: Carol.Gallagher@nrc.gov.

- **Mail comments to:** Cindy Bladey, Chief, Rules, Announcements, and Directives Branch (RADB), Office of Administration, Mail Stop: TWB-05-B01M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

- **Fax comments to:** RADB at 301-492-3446.

For additional direction on accessing information and submitting comments, see “Accessing Information and Submitting Comments” in the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: Mr. Andrew Barto, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-492-3336; e-mail: Andrew.Barto@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Accessing Information and Submitting Comments

A. Accessing Information

Please refer to Docket ID **NRC-2012-0100** when contacting the NRC about the availability of information regarding this document. You may access information related to this document by the following methods:

- **Federal Rulemaking Web Site:** Go to <http://www.regulations.gov> and search for Docket ID **NRC-2012-0100**.

- **NRC's Interim Staff Guidance Web Site:** The SFST-ISG documents are also available online under the "[Spent Fuel Storage and Transportation](#)" heading at <http://www.nrc.gov/reading-rm/doc-collections/#int>.

- **NRC's Agencywide Documents Access and Management System (ADAMS):**
You may access publicly available documents online in the NRC Library at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "[ADAMS Public Documents](#)" and then select "[Begin Web-based ADAMS Search](#)." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. The draft SFST-ISG-8, Revision 3 is available electronically under ADAMS Accession No. **ML12115A303**.

- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

B. Submitting Comments

Please include Docket ID **NRC-2012-0100** in the subject line of your comment submission, in order to ensure that the NRC is able to make your comment submission available to the public in this docket.

The NRC cautions you not to include identifying or contact information in comment submissions that you do not want to be publicly disclosed. The NRC posts all comment submissions at <http://www.regulations.gov> as well as entering the comment submissions into

ADAMS, and the NRC does not edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying or contact information in their comment submissions that they do not want to be publicly disclosed. Your request should state that the NRC will not edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment submissions into ADAMS.

II. Background

The NRC issues SFST-ISGs to communicate insights and lessons learned and to address emergent issues not covered in SFST Standard Review Plans (SRPs). In this way, the NRC staff and stakeholders may use the guidance in an SFST-ISG document before it is incorporated into a formal SRP revision.

The NRC staff has developed draft SFST-ISG-8, Revision 3 to (a) incorporate the results of burnup credit criticality safety research performed since the last SFST-ISG-8 revision in 2002 into the limits for the licensing basis, (b) provide recommendations regarding advanced isotopic depletion and criticality code validation techniques, (c) provide recommendations regarding credit for fission product neutron absorbing nuclides in the criticality analysis for SNF systems, (d) add a recommendation for an optional misload analysis coupled with additional administrative SNF system loading procedures, in lieu of a direct burnup measurement, and (e) make miscellaneous and editorial changes.

Proposed Action

By this action, the NRC is requesting public comments on draft SFST-ISG-8, Revision 3. This SFST-ISG proposes certain revisions to NRC guidance on implementation of the requirements in Title 10, Parts 71 and 72, of the *Code of Federal Regulations*. The NRC staff will make a final determination regarding issuance of the SFST-ISG after it considers any public comments received in response to this request.

Dated at Rockville, Maryland, this 19th day of April, 2012.

For the Nuclear Regulatory Commission.

/RA/

Brooke D. Poole, Acting Director,
Division of Spent Fuel Storage and Transportation,
Office of Nuclear Material Safety
and Safeguards.